

REMARKS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 22-58 are presently pending in this application, Claim 22 having been amended by the present amendment.

In the outstanding Office Action, the drawings were objected to because of informalities; the specification was objected to for informalities; Claims 22-40 and 42-58 were rejected under 35 U.S.C. §102(b) as being anticipated by Tench et al. (U.S. Patent 5,923,456) and Claim 41 was rejected under 35 U.S.C. §103(a) as being unpatentable over Tench et al. in view of Ito et al. (U.S. Patent 4,874,229).

In response to the objections to the specification and abstract, the noted informalities have been corrected herein.

In response to the objection to the drawings, submitted herewith is a separate LETTER REQUESTING APPROVAL FOR DRAWING CHANGES, submitting for approval changes to Figures 1a, 1b, 2 and 4. Specifically, Figures 1a, 1b, 2 and 4 have been amended to show Reference Characters A, B, C, D, E and F as required by the Examiner.

The specification has been corrected in consistent with the drawing change requested above.

Claim 22 has been amended herein. These claim amendments find support in the original specification, claims and drawings. For example, amended Claim 22 is supported by page 6, lines 10-29, of the specification. Hence, no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Briefly recapitulating, Claim 22 of the present invention is directed to an electrochemical device including at least one carrier substrate, and a stack of functional layers comprising at least one electrically conducting layer comprising metal oxide(s), and a multicomponent electrode including at least one electrochemically active layer, at least one higher-conductivity material and at least one network of one of conducting wires and conducting strips, the higher-conductivity material having a surface resistance which is lower than a surface resistance of the electrically conducting layer.

The outstanding Office Action asserts that Tench et al. disclose an electrochemical device as recited in Claim 22. Nevertheless, Tench et al. do not teach “a stack of functional layers comprising at least one electrically conducting layer comprising metal oxide(s), and a *multicomponent electrode including at least one electrochemically active layer, at least one higher-conductivity material and at least one network of one of conducting wires and conducting strips, said higher-conductivity material having a surface resistance which is lower than a surface resistance of said electrically conducting layer*” (emphasis added in *Italic*) as recited in Claim 22. On the other hand, Tench et al. disclose a stack of the electrically conducting film 106 and surface modification layer 108 besides the substrate 102 and electrolyte solution 112. Therefore, the structure recited in amended Claim 22 is believed to be distinguishable from Tench et al.

Ito et al. disclose a planar dimmer. However, Ito et al. do not teach “a stack of functional layers comprising at least one electrically conducting layer comprising metal oxide(s), and a multicomponent electrode including at least one electrochemically active layer, at least one higher-conductivity material and at least one network of one of conducting wires and conducting strips, said higher-conductivity material having a surface resistance which is lower than a surface resistance of said electrically conducting layer” as recited in

Claim 22. In particular, Ito et al. disclose the conductors 13, 14 and the electrochromic element 4 including electrodes 5, 6, color forming layers 7, 8, and electrolyte 9. Thus, the structure recited in amended Claim 22 is believed to be distinguishable from Ito et al.

Because neither Tench et al. nor Ito et al. discloses the stack of functional layers as recited in Claim 22, even the combined teachings of these applied references are not believed to render the structure recited in Claim 22 obvious.

For the foregoing reasons, Claim 22 is believed to be allowable. Furthermore, since Claims 23-58 ultimately depend from Claim 22, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 23-58 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Finally, the attention of the Patent Office is directed to the change of address of Applicants' representative, effective January 6, 2003:

Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

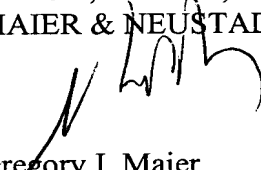
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Alexandria, VA 22314.

Please direct all future communications to this new address.

Respectfully submitted,

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Marked-Up Copy

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Amendment Filed on:

April 1, 2003

IN THE SPECIFICATION

Page 1, one line above the existing title, please insert the following:

--TITLE OF THE INVENTION.--

Page 1, before the paragraph beginning at line 5, insert the following:

--BACKGROUND OF THE INVENTION

--FIELD OF THE INVENTION.--

Page 1, before the paragraph beginning at line 14, insert the following:

--DISCUSSION OF THE BACKGROUND.--

Page 6, before the paragraph beginning at line 10, insert the following:

--SUMMARY OF THE INVENTION.--

Page 16, before the paragraph beginning at line 5, insert the following:

--BRIEF DESCRIPTION OF THE DRAWINGS.--

Page 16, before the paragraph beginning at line 19, insert the following:

--DESCRIPTION OF THE PREFERRED EMBODIMENTS.--

IN THE CLAIMS

Please amend Claim 22 as follows:

--22. (Twice Amended) An electrochemical device[,] comprising:

at least one carrier substrate; and [provided with]

a stack of functional layers comprising at least one electrically conducting layer comprising metal oxide(s), and a multicomponent electrode including at least one electrochemically active layer[; wherein said electrically conducting layer is part of a multicomponent electrode combining with said electrically conducting layer a)], at least one higher-conductivity material and [or b)] at least one network of one of conducting wires [or] and [of] conducting strips, said higher-conductivity material having a surface resistance which is lower than a surface resistance of said electrically conducting layer [or c) a combination of a) and b)].--

IN THE ABSTRACT

Please delete the current abstract of the disclosure and substitute therefor a new abstract as follows:

[PATENT

ELECTROCHEMICAL DEVICE OF ELECTRICALLY CONTROLLABLE SYSTEM TYPE HAVING VARIABLE OPTICAL AND/OR ENERGY PROPERTIES

The subject of the invention is an electro-chemical device, in particular an electrically controllable system having variable optical and/or energy properties, including at least one carrier substrate provided with a stack of functional layers comprising at least one electrically conducting layer A based on metal oxide(s) and at least one electro-chemically active layer F. Said layer A is part of a multicomponent electrode E combining with the layer A at least one

higher-conductivity material B and/or at least one network C of conducting wires or conducting strips.

Another subject of the invention is the applications of the device, in particular in glazing.]

--ABSTRACT OF THE DISCLOSURE

An electrochemical device including at least one carrier substrate, and a stack of functional layers comprising at least one electrically conducting layer comprising metal oxide(s), and a multicomponent electrode including at least one electrochemically active layer, at least one higher-conductivity material and at least one network of one of conducting wires and conducting strips, the higher-conductivity material having a surface resistance which is lower than a surface resistance of the electrically conducting layer.--